What is claimed is:

1. A wideband amplifier including a first differential amplifier for providing amplified differential signals at first and second nodes in response to first and second differential input signals; and a second differential amplifier for amplifying said amplified differential signals to provide differential output signals, which comprises:

first and second phase compensation capacitors;

a first source follower circuit including a first MOS transistor receiving said first differential input signal at a gate thereof and having the source thereof connected to a first constant-current supply and to said second node via said first phase compensation capacitor; and

a second source follower circuit including a second MOS transistor receiving said second differential input signal at a gate thereof and having the source thereof connected to a second constant-current supply and to said first node via said second phase compensation capacitor.

2. A wideband amplifier according to claim 1, wherein said first differential amplifier directly receives said first and second differential input signals.

3. A wideband amplifier according to claim 2, wherein said first differential amplifier said first and second differential input signals through said first and second source follower circuits.

4. A wideband amplifier according to claim 1, wherein

said first differential amplifier includes a gain boosted cascode amplifier.

5. A wideband amplifier according to claim 1, wherein said first and second phase compensation capacitors include MOS capacitors.

6. A wideband amplifier comprising:

a first source follower circuit including a first MOS transistor receiving a first differential input signal at a gate thereof and having the source thereof connected to a first constant-current supply;

a second source follower circuit including a second MOS transistor receiving a second differential input signal at a gate thereof and having the source thereof connected to a second constant-current supply;

a first differential amplifier for amplifying signals applied to sources of said first and second MOS transistors to provide first and second amplified differential signals at first and second nodes;

a first phase compensation capacitor connected between a source of said first MOS transistor and said second node;

a second phase compensation capacitor connected between a source of said second MOS transistor and said first node; and

a second differential amplifier for amplifying said first and second amplified differential signals to provide differential output signals.